



# UNITED STATES PATENT AND TRADEMARK OFFICE

H.D.

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,228	03/31/2004	Julio Cesar Chaves	3084.028	7326
26375	7590	12/13/2006	EXAMINER	
SINSHEIMER JUHNKE LEBENS & MCIVOR, LLP 1010 PEACH STREET P.O. BOX 31 SAN LUIS OBISPO, CA 93406			REHM, ADAM C	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 12/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/816,228	CHAVES ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Adam C. Rehm	2875

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 20 July 2006.
- 2a) This action is FINAL.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-25 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 27 July 2005 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the equiangular spiral displaced laterally from an axis of said solid of revolution per Claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 8 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by POPOVICH ET AL. (US 4,709,312), which discloses an optical device for distributing the radiant emission of a light emitter comprising:

- A lower transfer section (62, Fig. 5);
- An upper ejector section situated upon the lower transfer section and being shaped such that the emission is redistributed externally into a substantially solid angle (410, Figs. 10-12 illustrate an upper light redirecting section situated upon a lower section);
- Wherein said transfer section is operable for placement upon the light emitter (Figs. 10-12 illustrate the lower section on LED 430);
- Wherein said upper section is shaped such that the emission is redistributed externally into a substantial solid of revolution (Column 6, Line 51); and
- Wherein said ejector section comprises a lower and a connecting upper portion (Figs. 10-12 illustrate a lower portion adjacent LED (430) and a connected upper portion adjacent side face (120)).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over POPOVICH ET AL. (US 4,709,312), which discloses an optical device for distributing the radiant emission of a light emitter comprising:

- A lower transfer section (62, Fig. 5);
- An upper ejector section situated upon the lower transfer section and being shaped such that the emission is redistributed externally into a substantially solid angle (410, Figs. 10-12 illustrate an upper light redirecting section situated upon a lower section);
- Wherein said transfer section is operable for placement upon the light emitter (Figs. 10-12 illustrate the lower section on LED 430);
- Wherein said transfer section is a solid of revolution having a profile shape of an equiangular spiral (Column 6, Line 51).

4. While POPOVICH substantially discloses the claimed invention including a solid of revolution having a profile shape of an equiangular spiral (Column 6, Line 51), undisclosed is the spiral laterally displaced from an axis of the solid of revolution. However, Applicant has not disclosed that such displacement or shifting of existing elements of POPOVICH solves any stated problems or is for

any particular purpose and it appears that the invention would perform equally well with the disclosed configuration of POPOVICH. Likewise, discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 205 USPQ 215.

5. Claims 2-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over POPOVICH ET AL. (US 4,709,312) and LYS ET AL. (US 6,340,868). POPOVICH discloses the claimed invention, but does not disclose a plurality of individually controlled LEDs with different wavelengths/colors or LEDs that are night-vision compatible. However, LYS ET AL. teaches a processor (16) for individual control of the LEDs for the purpose of enabling an operator to produce illumination in any color (Column 9, Lines 55-63) and night-vision compatible/infrared LEDs for the purpose of providing various lighting effects (Column 75, Lines 43-60). It would have been obvious to one of ordinary skill in the art at the time of invention to modify POPOVICH and use the processor and infrared LEDs as taught by LYS ET AL. in order to provide an adaptable system capable of various uses in various environments.

6. Claims 9-16 and 18-25 rejected under 35 U.S.C. 103(a) as being unpatentable over POPOVICH ET AL. (US 4,709,312). POPOVICH discloses the claimed invention including a light ejector (as provided above), but does not disclose an ejector of a plurality of different random shapes, i.e. a biconical surface per Claim 9, convex and concave toroidal lenslets per Claim 10, a flange-like protruding profile per Claim 11, an upper equiangular spiral per Claims 12, 13 and 18, a portion of a sphere per Claim 14, an inverted cone per Claim 15, a

sphere with toroidal lenslets per Claim 16, a radial array of right-angled v-grooves per Claims 19-22, a cylinder per Claim 23, a polygonal per Claim 24 or a faceted transfer section per Claim 25. However, more than a mere change of form is necessary for patentability with such a change resulting in more than useful natural phenomenon that man has accumulated through common knowledge. *Span-Deck Inc. v. Fab-Con, Inc.* 215 USPQ 835. It would have been an obvious matter of design choice to manipulate the shape of the transfer section of POPOVICH, since Applicant has not disclosed that the reshaping solves any stated problems or is for any particular purpose and it appears that the invention would perform equally well with the shape of the POPOVICH transfer section. Motivation for such includes the incentive of obtaining optimal light distribution for a user's desired application. Notably, discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 205 USPQ 215.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. PELKA ET AL. (US 6,647,199) discloses use of an equiangular spiral.
8. HEINISCH ET AL. (US 4,709,312) discloses use of an equiangular spiral.

### ***Correspondence***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Adam C. Rehm whose telephone number is 571.272.8589. The examiner can normally be reached on M-F 9-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 571.272.2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ACR  
10/15/2006

*Thomas M. Simbs*  
Thomas M. Simbs  
Primary Examiner